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UNIVERSITY OF ALBERTA

AN INVESTIGATION OF STUDENT USE OF THE SUPPLEMENTARY MATERIALS LIST AT ATHABASCA UNIVERSITY

BY

STEVEN ALLEN SCHAFER

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF LIBRARY AND INFORMATION STUDIES

FACULTY OF LIBRARY AND INFORMATION STUDIES

EDMONTON, ALBERTA
FALL 1991

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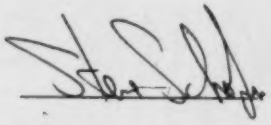

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Abstract

Distance education is a rapidly growing mode of both offering and attaining a university education. Athabasca University is an open university, with 18,000 students, that offers instruction at a distance. Currently, 200 courses are offered through three faculties, leading to five undergraduate degrees and six university certificate programs.

This thesis presents the findings of a mail survey that was conducted of a simple random sample of active students at Athabasca University to investigate student use of the supplementary materials list.

Major findings indicate that 87% of the respondents to the survey were aware that Athabasca University provides library service to its students and only 21% actually used library materials to complete the course or courses they were taking. Of the students who used library materials, 65% indicated that their course had a supplementary materials list.

With respect to future provision of library services to Athabasca University students, 64% of all the respondents indicated that they either own or have access to a computer and commented that they want to have remote access to the library catalog to search the holdings for themselves.

It is concluded that more attention should be given by Athabasca University Library and course development teams to the compilation of the supplementary materials list and that remote access by students to the library catalog should be implemented.

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Chapter I

Introduction

Distance Education

The purpose of this thesis is to investigate student use of the supplementary materials list that is included in the home-study package for most Athabasca University courses. At the outset of this study, it is important to have a basic level of understanding of distance education, Athabasca University, and the provision of library services to Athabasca University students.

Distance education is a growing and expanding mode of attaining an education, particularly at the post-secondary level. Distance education implies that the teacher and student are separated by physical space (distance) and usually, though not always, by time. With the use of audio/video teleconferencing and various modes of communications, the separation of teacher and student by time may be minimal to nonexistent. Distance education, however, usually means that the teacher and student are not face to face.

Leading theorists in the field have provided definitions of distance education, although a single definition has not been agreed upon. Desmond Keegan describes distance education as follows:

> Distance education is a generic term that includes the range of teaching/learning strategies referred to as "correspondence education" or "correspondence study" at further education level in the United Kingdom; as "home study" at further education level and "independent study" at higher education level in the United States; as "external studies" in Australia; and as "distance teaching" or "teaching at a distance" by the Open University of the United Kingdom (Keegan, 1990, p. 29).

The synonymous terms such as correspondence education, correspondence study, home study, independent study, external studies, distance teaching, or teaching at a distance, it must be pointed out, are subsets of distance education.

A definition of distance education must include the elements of teaching and learning. Distance teaching is the responsibility of the educational institution and/or the instructor, and distance learning is the responsibility of the student. Keegan suggests that distance teaching and distance learning are terms that must be included in the description of distance education. However, each term only describes one-half of the process that must occur for education to take place.

'Distance teaching' indicates clearly the process of course development by which a distance institution prepares learning materials for students. In the same way wide currency has been given to the term 'distance learning' or 'learning at a distance' for the process as seen from the student's perspective (Keegan, 1990, p. 32).

Distance education provides opportunities to use various instructional methods, multi-media processes, and educational strategies. The educational institution is challenged to bridge the distance between the teacher and the learner.

Significant definitions of distance education, included in Keegan's work, *Foundations of Distance Education* (2nd ed.), and which may be found in other sources, are listed here for the purpose of understanding more fully the concept of distance education.

G. Dohmen of the German Distance Education Institute, Tubingen, Germany, 1967, provides this definition:

Distance education is a systematically organised form of self-study in which student counselling, the presentation of learning material and the securing and supervising of students' success is carried out by a team of teachers, each of whom has responsibilities. It is made possible at a distance by means of media which can cover long distances. The opposite of 'distance education' is 'direct education' or face-to-face education: a type of education that takes place with direct contact between lecturers and students (Keegan, 1990, p. 36).

O. Peters, 1973, suggests this definition:

Distance teaching/education is a method of imparting knowledge, skills and attitudes which is rationalised by the application of division of labour and organisational principles as well as by the extensive use of technical media, especially for the purpose of reproducing high quality teaching material which makes it possible to instruct great numbers of students at the same time wherever they live. It is an industrialized form of teaching and learning (Keegan, 1990, p. 37).

M. Moore, 1973, provides the following definition that also suggests that new technologies must be incorporated into the teaching/learning process.

Distance teaching may be defined as the family of instructional methods in which the teaching behaviors are executed apart from the learning behaviors, including those that in a contiguous situation would be performed in the learner's presence, so that communication between the teacher and the learner must be facilitated by print, electronic, mechanical or other devices (Keegan, 1990, p. 37).

B. Holmberg, 1977, provides the following definition of distance education.

> The term 'distance education' covers the various forms of study at all levels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises, but which, nevertheless, benefit from the planning, guidance and tuition of a tutorial organisation (Keegan, 1990, p. 38).

These definitions identify some of the significant components of distance education: separation of the teacher and learner, use of technology in the teaching/learning process, and organisation and planning by the educational institution.

Keegan provides a fuller list of six basic elements that are essential to define, describe, and fully understand distance education. They are as follows:

(1) the separation of teacher and learner which distinguishes it from face-to-face lecturing;

(2) the influence of an educational organization which distinguishes it from private study;

(3) the use of technical media, usually print, to unite teacher and learner and carry the educational content;

(4) the provision of two-way communication so that the student may benefit from or even initiate dialogue;

(5) the possibility of occasional meetings for both didactic and socialization purposes; and

(6) the participation in an industrialized form of education, which, if accepted, contains the genus of radical separation of distance education from other forms within the educational spectrum (Keegan, 1990, pp. 38-39).

Keegan's description of distance education has been both widely accepted and criticized. D. Randy Garrison, for example, suggests that "Keegan's definition is surprisingly narrow" and that there is a dilemma in defining distance education with such precision that still allows for new perspectives to be accomdated (Garrison, 1989, p. 5). Garrison and Doug Shale suggest three criteria with which to evaluate the process of distance education. They are as follows:

(1) Distance education implies that the majority of educational communication between (among) teacher and student(s) occurs noncontiguously.

(2) Distance education must involve two-way communication between (among) teacher and student(s) for the purpose of facilitating and supporting the educational process.

(3) Distance education uses technology to mediate the necessary two-way communication (Garrison, 1989, p. 6).

Distance education, according to Garrison, is "a species of education" that has emerged and is continually concerned with how to most efficiently adopt new technologies to facilitate the educational process (Garrison, 1989, p. 8).

Athabasca University

Athabasca University specializes in the delivery of university-level courses through various modes of course delivery. Unlike a dual-mode open university, which is "a regular campus-based institution with a distance education component," Athabasca University is a single-mode open university "devoted exclusively to distance education" (Konrad and Small, 1989, in Sweet, p. 197).

A mission statement and long-term plan were adopted by Athabasca University in May 1985. The *Mission Statement* describes the purpose of Athabasca University and provides a context for the University's activities.

> Athabasca University is dedicated to the removal of barriers that traditionally restrict access to and success in university-level studies and to increasing equality of educational opportunity for all adult Canadians regardless of their geographical location and prior academic credentials. (Athabasca University, 1985, p. 1).

A person must meet two requirements before being accepted for studies at Athabasca University. Individuals must be at least 18 years of age and be residents of Canada. Students who are admitted to Athabasca University may take courses available through one of the three faculties: Administrative Studies, Arts, or Science. Courses may be taken for general interest or for the accumulation of credits leading to one of five degree programs: Bachelor of Administration, Bachelor of Arts, Bachelor of Commerce, Bachelor of General Studies, or Bachelor of Nursing (post-R.N.). In addition to the degree programs, students may take courses leading to one of six university certificate programs: University Certificate in Accounting, University Certificate in Administration, University Certificate in French Language Proficiency, University Certificate in Information Systems, University Certificate in Labour Relations, or University Certificate in Public Administration. In addition, a selection of non-credit courses

is offered.

The home-study package is the primary mode of course delivery at Athabasca University. However, courses may also be supported by teleconference, seminar, laboratory, or field work. Upon registration, each student receives a complete course package that consists of all required texts, a student manual, a forms package, and a study guide which usually includes a supplementary materials list. Occasionally, a book of readings, consisting of required, selected articles from various sources that are reproduced by Athabasca University, is included in the course package. Some course packages may contain pieces of computer software and/or instructions on how to access the Athabasca University computing services for the purposes of completing their course requirements. Upon registration, each student is assigned a telephone tutor and has access to library services.

Library Services Provided by Athabasca University

It is believed, as identified in the definitions of distance education, that for effective education to take place, appropriate planning and organization for the use of various media must be done. Library services, therefore, are among the essential supporting mechanisms in place since the inception of Athabasca University. The provision of library services to students of Athabasca University is both unique and complex. Students who reside "at a distance" from the institution at various locations across Canada must be served by the Library in radically different ways from those provided by traditional university libraries.

Upon enrolment in a course with Athabasca University, each student has access to library services by Athabasca University Library. Athabasca University students can submit their requests for library materials by mail, FAX, telephone, or in-person. The *Library Annual Report, 1989/90* reveals that 8,138 requests were received at the library information desk during the fiscal year.

Of all requests, almost half (4,116) were from students. On average, students made 343 requests for library materials per month to Athabasca University Library. During this report year, 9,559 items were circulated to students in response to their inquiries. Library materials are sent to the student either by postal service to the student's address, by inter-office courier to one of three Athabasca University Learning

Centres in Alberta, or by government courier to other government office locations within Alberta.

One of the difficulties of providing library services to Athabasca University students is that of making students aware of materials in the library collection that would be helpful for completing a course assignment or project. While an on-line library catalog, AUCAT, was installed in 1989 and is operational at all Athabasca University locations, provision is not yet in place for remote access by students other than from the Learning Centres which are located in Calgary, Edmonton, and Fort McMurray. However, even if remote access were available, only those students with computer hardware and communication packages would be able to use the on-line catalog. Nonetheless, the Library plans to provide remote access to AUCAT at some point in the future.

One useful instrument for informing all students of what materials in the Athabasca University Library are available for a specific course is the supplementary materials list that forms a part of the package for each course. The term "supplementary materials" refers to materials suggested by Athabasca University instructors for extra reading, listening, or viewing that would aid an understanding of the course materials. The purpose of the supplementary materials list is to provide, for the student of a particular course, a list of materials in the Athabasca University Library's collection that would be useful, but not essential, for completing a course assignment or project. Supplementary materials are additional to the required materials that are included in the complete home-study package for each course.

The supplementary materials list is compiled by a course team that primarily comprises a subject matter expert (author), a course team manager, an editor, and a visual designer. However, it is usually the subject matter expert and the editor who compile the supplementary materials list, and library reference staff are often called upon to participate.

Statement of the Problem

The primary objective of this study is to investigate student use of the supplementary materials list that forms a part of the package for most Athabasca University courses. The overall research question is: Do Athabasca University students use the supplementary materials list? Data were also gathered to determine: (1) selected characteristics of Athabasca University students; (2) student awareness and use of library materials; (3) among students who are library users, their awareness and use of the supplementary materials list; and, (4) among all students, their awareness and use of computers. The questions that were investigated within each of these clusters were as follows:

(1) Selected Characteristics of Athabasca University Students

1. Age of student.
2. Gender of student.
3. Previous education attained.
4. Faculty in which the student is enrolled.
5. Specific course in which the student is enrolled.
6. The number of Athabasca University courses in which the student is currently enrolled.
7. The number of Athabasca University courses the student has successfully completed.

(2) Student Awareness of the Library and Library Materials

1. Do students use library materials to complete Athabasca University courses?
2. If so, did they use Athabasca University Library and/or other libraries?
3. If so, what types of library materials do students request?
4. How do students rate their satisfaction with the library materials and services received through Athabasca University?

5. If not, are students aware that library materials are available to them?

6. Do students know the procedure for requesting library materials from Athabasca University Library?

(3) Student Awareness of the Supplementary Materials List

1. Are students who use library materials aware that there is a supplementary materials list included in the course materials package?

2. Do students consult the supplementary materials list before requesting library materials from the Athabasca University Library?

3. With what frequency do students consult the supplementary materials list?

4. Does student use of the supplementary materials list vary with the course the student is taking or the program in which the student is enrolled?

5. Do students prefer to select specific material from the supplementary materials list or request material on the basis of the subject of the assignment, leaving selection of material up to the library staff and availability of material?

6. Do students obtain, from other libraries, material identified on the supplementary materials list?

7. Do students think the supplementary materials list is an essential component of the course package?

8. How do students evaluate the supplementary materials list as an effective means of identifying library materials needed for completing a course assignment or project?

9. What would make the supplementary materials list more useful to students?

10. What are the reasons students do not use the supplementary materials list?

11. Do students who do not use the supplementary materials list use materials other than those provided in the course package for completing course assignments?

12. What would make the supplementary materials list more useful? Given access to AUCAT, the on-line library catalog, would students consider the supplementary materials list to be an essential component of the course package?

13. In what ways would access to AUCAT affect the use of the supplementary materials list?

(4) Student Awareness and Use of Computers

1. Do students own or have access to a computer and a modem?

2. Have students used a computerized library catalog?

3. Are students aware that AUCAT, the Athabasca University Library catalog, is on computer?

4. If students had remote access to AUCAT, how might that affect their studies at Athabasca University?

This study is timely. Previous studies of Athabasca University students, graduates, and institutional programs have been conducted. However, only one study of the library services provided to Athabasca University students, by Appavoo and Hansen in 1988, was conducted prior to the present research. This is the first study of Athabasca University students with a specific focus on their use of the supplementary materials list.

It is hoped that this study will make the following three contributions: First, that it will contribute useful information to the Library with respect to the provision of quality library services to Athabasca University students.

Second, that this study will contribute to Athabasca University's knowledge of the role of the supplementary materials list in curriculum development and learning effectiveness. It is anticipated that course development teams will benefit from an evaluation of student use of the supplementary materials list with respect to whether the supplementary materials list is an essential component of the course package.

Third, it is anticipated that this study will contribute to the body of literature that already exists on the topic of distance education librarianship. It is hoped that the results of this study will be of interest to other institutions providing distance education, specifically those that are exclusively open universities.

Individuals with an interest in distance education and/or distance education librarianship should benefit from an evaluation of library services to Athabasca University students.

Definition of Key Terms

The following key terms are defined for the purpose of this study: supplementary materials list, Athabasca University student, and use.

Supplementary Materials List

The supplementary materials list is a component of Athabasca University courses that identifies library materials that are in addition to the materials included in the complete course package. The library materials on the supplementary materials list may include monographs, periodical or journal articles, sound recordings, video recordings, or kits (such as the model brain, molecular model, physical examination instruments, or collection of cultural artifacts). Supplementary materials are not required materials; they are materials that have been identified as useful for additional reading and/or used in promoting the successful completion of a course assignment or project. The materials on the supplementary materials list may usually be obtained from the Athabasca University Library. A library in the vicinity of the student may be accessed for monograph and periodical materials.

Athabasca University Student

Student is defined in *Webster's Third New International Dictionary of the English Language* as "a person engaged in study," or "one enrolled in a class or course in a school, college, or university" (*Webster's*, 1976). An Athabasca University student is an individual who has made application for admission to Athabasca University and has been accepted as such. The only requirements for admission to Athabasca University are that an individual be at least eighteen years of age and a resident of Canada.

Use

Use is defined in *Webster's Third New International Dictionary of the English Language* (1976). Use means to put into action or service for an intended purpose, or to make instrumental. Synonymous terms include utilize and apply. In the context of this research, use refers to what extent the supplementary materials list is put into action or service, or made instrumental by students when requesting library materials. In other words, use refers to the extent to which the supplementary materials list is made instrumental, is utilized, or is applied by Athabasca University students as a means of selecting materials to borrow from the library.

Limitations of the Study

There are three primary limitations to this study: First, while the literature contains material on the subject of library services to off-campus or external students, this thesis focuses on student use of the supplementary materials list at Athabasca University.

Second, evaluation is of student use of the supplementary materials list, not of the use of these lists by faculty, tutors, or library staff who provide services to students. A comprehensive evaluation of the effectiveness of the supplementary materials list would require data collection from these other groups involved in the use of the supplementary materials list and is beyond the scope of this thesis research.

Third, the evaluation is of "active" students; that is, students who are enrolled in an Athabasca University course. While students may be admitted and registered, they may not necessarily be enrolled in a course. This investigation is limited to registered students who are enrolled in a course at the time that the study was conducted.

Chapter II

Review of the Literature

The Search Strategy

The literature search was conducted in two parts. First, a search was conducted on *ERIC*, using the CD-ROM product, *DialogOnDisc* that provides coverage of *ERIC* documents, and on *Library and Information Science Abstracts (LISA)*, using the Dialog on-line database. To search both databases fully, free-text searches were conducted. The search terms used on *ERIC* were "open universities," "open university," "distance education," "library surveys," "library users," "library services," and "reference services." Seventy-one titles were retrieved. The search terms used on *LISA* were "distance education," "distance education institutions," "distance learning," "open universities," and "open university." Fifty-eight titles were retrieved. Between the two databases, *ERIC* representing education, and *LISA* representing the field of librarianship, the literature was covered thoroughly.

Second, a search was done of the distance education collection at Athabasca University Library. The key term used for this portion of the search was "library services."

The Literature

As was expected, there was some repetition of titles that appeared in each part of the literature search. One of the difficulties in reviewing the literature was determining which titles were most important to the study. It was found that the majority of the literature describes, in a general sense, the provision of library services to off-campus, extramural, or part-time students of traditional universities.

There is a growing body of literature that describes distance education and the provision of library services to distance education students. Keegan (1990), Sweet (1989), and Mugridge and Kaufman (1986) describe the theory, history, and growing phenomenon of distance education around the world, and particularly, in Canada. These authors suggest that support services to distance education students are paramount to the success of both the student and the program, and that library services are essential to an exclusively distance education institution.

The literature revealed that distance education institutions have been established around the world both in developed and developing countries. For example, open universities and distance education institutions in Great Britain, Australia, New Zealand, Canada, the United States, India, Thailand, the Pacific Islands, Pakistan, and Nigeria offer distance education and endeavor to provide library services to their students. While the description of library services to distance education students is evident in the literature, it was found that few exclusively distance education institutions evaluated the library needs of their students or the library services provided to their students.

The literature may be divided into three categories: first, literature that describes, in a general sense, distance education librarianship; second, library services provided by traditional universities to their extramural, off-campus, or part-time students; and third, library services provided by exclusively open universities. It is the literature contained in the third category that is most important to this review.

Distance Education Librarianship

It was during the 1970s that distance education librarianship became of age. Since that time there has been a steady increase in the quantity and quality of literature in the field of distance education librarianship.

Five bibliographies provide comprehensive identification and review of the literature on the subject of distance education and library services to distance education students from as early as 1921 to the present. Wolf (1951); Haworth (1982); Harry (1985); Shklanka (1990); and Latham, Slade, and Budnick (1991) provide examination and review of the literature on the subject of library service to distance education students. Of interest is the evolution of terminology used to describe distance education; that is, from the use of "correspondence study" and "university courses by extension" to "distance education" and "off-campus librarianship"; and the use of technology as a primary means of bridging the distance between the student and teacher.

Library Services to External, Off-campus, or Part-time Students

The majority of the literature is in the category of library services to external, off-campus, or part-time students, and presents the need and rationale for establishing a program of library services specifically to meet the needs of distance education students. The literature in this category describes how traditional post-secondary institutions provide for the library needs of their non-resident students. Guidelines and standards, collection development and management, document delivery, interlibrary cooperation, and bibliographic instruction are areas of general librarianship that are integral to distance education librarianship. The methodology of each area, however, must be adjusted to meet the specific and, sometimes, unique demands of the distance education library. The literature describes the key elements of distance education librarianship that must be incorporated into the plan for effective and quality delivery of library services to distance education students. Kascus and Aguilar (1988), Crocker (1989, 1986), Appavoo (1986, 1985), Fisher (1985, 1982, 1981), and Slade (1986) present overviews of library services and reinforce the requirement to organize and implement effective and quality programs of library services to distance education students.

The Off-Campus Library Services Conference is a primary forum at which distance education librarians and administrators exchange ideas and methodologies of delivery of library services to off-campus and distance education students. The *Proceedings* of each conference (four have been held from 1982 to 1988) provide valuable sources of information that covers guidelines, policies, programs, and uses of new technology in distance education librarianship. The *Proceedings* of the 1986 Conference held in Reno, Nevada, contain 30 papers, while the *Proceedings* of the most recent 1988 Conference held in Charleston, South Carolina, contain 36 papers.

Library Service to Students of Exclusively Distance Education Institutions

The literature in the category of library service to students of exclusively distance education institutions is the most significant to this thesis. No study of a supplementary materials list was found. It was discovered that there is a relatively small amount of literature that focuses specifically on the subject of library services to students of exclusively distance education institutions; some selected studies of library

services to distance education students, as appropriate, are identified here.

One of the earlier studies of library service to distance education students was that conducted by Marsterson and Wilson (1975). A study was conducted by a mail questionnaire and data were received from 81 home-based students of London University and 311 home-based students of the Open University (UK). The study provided, in addition to characteristics of the home-based student, an analysis of the types of libraries used by the students, the library services provided, and the study requirements of the students. The public library was identified as a primary source of materials by students of both institutions. While London University is a traditional university, the Open University is an exclusively open university. At both institutions, it was found that home-based students relied primarily on the services of public libraries.

Wijesinghe (1988) provides a concise description of library services provided to students of the Open University of Sri Lanka. It was found that close liaison between the Open University Library and public libraries is the key to providing library services to the students.

Slade (1985 and 1988) conducted two mail surveys of Canadian post-secondary institutions to determine what library support was available for their off-campus students. The 1985 survey was of 24 Canadian universities; the 1988 survey was of 199 Canadian post-secondary institutions. The focus of the surveys was on library services to off-campus students of traditional universities rather than on library services available or provided to students of an open university. The results of the two surveys by Slade revealed that attempts were being made by some Canadian university libraries to provide library services to off-campus students who are unable or unwilling to attend, on a full-time basis, a traditional university. However, it was found that distance education students had difficulty obtaining library services from an academic library other than the institution in which the student was enrolled. In other words, universities tended to provide library services to their own students and there were no reciprocating arrangements in place that provided students of one university with the opportunity to obtain borrowing privileges from another university's library.

Fisher and Bolton (1987) conducted a study of 2,301 extramural students at the University of Birmingham (UK) to evaluate the effectiveness of library services provided to students and tutors. Unlike

an exclusively open university system, the University of Birmingham is a traditional university with extramural or external students. The focus of this study was on the use of a book-box system of providing library materials to groups of extramural students taking a course at off-campus locations. A supply of library materials was deposited at the site at which students were taking the course. The major finding of this study was that the book-box system proved to be an essential service. A recommendation at the conclusion of the study was that students should not be limited to this service as the only means of acquiring library materials. Instead, students should be encouraged to use library services on an individual basis.

Dale and Schippes (1987) provide an overview of the provision of library resources to students of the Dutch and British Open Universities. The important component of library services to students of the British Open University is the inclusion of "guides to the use of libraries and literature" in the course materials. The study reports that the aim of the "guide" is to show students how they can gain access to the network of most appropriate and available network of libraries.

Burge, Snow, and Howard (1988) conducted an investigation of the library needs of distance education students in northern Ontario. Educational institutions, academic and public libraries, and distance education students were surveyed by mail questionnaire to determine how library services were provided to these students, located throughout northern Ontario. A separate mail survey was constructed for each of the survey groups. A total of 76 out of 150 public library staff responded; 17 out of 20 academic library staff responded; 53 faculty and instructors from 7 educational institutions responded; and 517 out of 1750 students enrolled in distance education courses responded.

The findings of the study by Burge, Snow, and Howard indicated that public library services were used very little by distance education students. Some staff of the public libraries that were surveyed did not know whether distance education students were using their libraries. The study further revealed that there was little publicity of library services to distance education students. Academic library staff reported that there was limited financial support for distance education library services. Some academic library staff reported that such services as interlibrary loans could be arranged and computerized literature searches

could be conducted for distance education students. The majority of academic library staff who responded to the survey, however, reported that they believed students were not aware of the library services available to them, or that students did not think they needed library assistance to complete their courses. More than half of the faculty and instructors who responded to the survey indicated that, while they believed the course materials were of paramount importance, some additional materials should be recommended to the students. Most faculty and instructors indicated that libraries should promote their services more and be prepared to provide library instruction. The majority of students who responded to the survey sent to them indicated that they believed that distance education courses were more accessible to them than regular classroom courses, and they believed that the course materials were sufficient to complete the courses. Students did, however, report that they used libraries located in their vicinity to acquire library materials.

Appavoo and Hansen (1988) conducted a study of Athabasca University Library users to compile a profile of typical users and to determine their information needs and their patterns of library use. This is the only study of Athabasca University students that has been done with respect to library services. This study consisted of two parts. First, a telephone survey was conducted of a random sample of 300 students registered in all courses with the exception of accounting and computer science courses. Second, the 683 library requests that were received within a four-month period (Sept. to Dec. 1987), either by mail or telephone, were analyzed. There were three primary findings of this study. First, it was found that students requested specific library materials that had been suggested to them by their tutors. Second, it was found that use of the Library increased as the number of courses the student took increased. Third, the percentage of eligible students who used Athabasca University Library within the four-month period was 9%.

Auger and Tremaine (1987) conducted a mail survey of extramural students at Massey University in New Zealand. This study, more closely than any other found in the literature, resembles the current thesis. The total enrolment of extramural students at Massey was 10,391. A sample size of 1,600 was generated using a systematic sampling method. A response rate of 79% was attained. The major finding of this study was that 95% of the respondents were aware of library services to extramural students, but only 43% used the library services of Massey University. The study concluded with the following recommendations: first,

that every extramural student be made aware of the library services provided by Massey; second, that closer liaison take place between teaching staff and the library; and third, that there be an emphasis on quality of services to users.

The literature provides evidence that there is a growing need and concern among distance education institutions to provide library services to their students. It is increasingly necessary that library services be made available to off-campus or extramural students of traditional universities and to students of exclusively distance education institutions. In some cases students are left to acquire needed library materials on their own. Although such students may rely on the services of public libraries, public libraries are often unaware of the specific library needs of distance education students, and many public libraries may be uninformed of the specific needs of distance education library users and therefore be unable to provide appropriate materials for university-level courses. It is ultimately up to each distance education institution to accept the responsibility of providing library services to meet the educational needs of its students.

Chapter III

Research Methodology

The study was carried out by means of a questionnaire survey of a random sample of all Athabasca University students enrolled in one or more courses.

Pilot Study

A pilot study of student use of the supplementary materials list was conducted among 30 Athabasca University Library users in early 1990. Data were collected over a one week period by means of brief telephone interviews. Students who telephoned the library information desk to place requests for library materials were asked to participate in a brief telephone survey on student use of the supplementary materials list. The students who participated in this pilot study were self-selected library users; that is, they requested library materials on their own initiative. Data were collected with respect to patterns of library use, impressions of library services, and evaluation of the supplementary materials list. See Appendix 1 for the questionnaire that was used for the telephone interviews in the pilot study.

The pilot study served as a test to determine the feasibility of investigating student use of the supplementary materials list among all active students of Athabasca University. It was anticipated that a survey instrument similar to the one used for the pilot study would be used for the thesis research, with appropriate modifications for a questionnaire survey by mail among a random sample of all active Athabasca University students. A total of 30 students participated in the pilot study. Some 40% of the participants said that they were between 40 and 49 years of age, 35% were between 30 and 39, and 15% were between 20 and 29. Of this total, 40% were enrolled in their first Athabasca University course and 33% had completed one to three courses. Almost 80% of the participants considered library use to be essential to success in their Athabasca University course work. Virtually all of the participants (29 out of 30 students) said that they either always or occasionally consulted the supplementary materials lists when requesting library materials from the Athabasca University Library, and nearly 80% thought that the supplementary materials list was an essential component of the Athabasca University course package. The

majority of the participants also indicated that they wanted the Library to send them materials in addition to the library materials that they specifically requested.

The statistical profile is not generalizable to all Athabasca University students. The pilot study was conducted among self-selected users of Athabasca University Library; that is, students who phoned the Library to make a request for materials were the participants of the pilot study. Because the degree of generalizability of the pilot study results was unknown, the decision was made to conduct a more comprehensive analysis of active Athabasca University students, with specific reference to the supplementary materials list.

Approvals and Ethics Review Requirements

Approvals from the following committees or departments were required and secured prior to proceeding with the research:

(1) The Graduate Research Committee, School of Library and Information Studies, University of Alberta.

(2) The Library, Athabasca University.

(3) The Academic Research Committee, Athabasca University.

(4) The Centre for Distance Education, Athabasca University.

(5) The Registrar, Athabasca University, to obtain mailing labels with the name and address for each student selected through random sampling.

Population and Sample

Athabasca University has an enrolment of approximately 18,000 students; students who have been admitted to Athabasca University. Admitted students are not necessarily registered in a course at any given time, and therefore they are not all "active" students. The number of active students—those taking at least one Athabasca University course—at the time the random sample was drawn in March 1991 was 7,308. This figure was generated from ISIS, the student records system maintained by Athabasca University. For

purposes of the thesis research, all students registered in an Athabasca University course were included in the population of active students.

From the population of active students identified by ISIS, a simple random sample of 800 students was drawn. The required sample size from a population of 7,000 is 261 cases, based on a 90% confidence level and allowing for a permissible error of ±0.05. The sample size was inflated to 800 cases to allow for slightly less than a 50% response rate. The inflation figure was based on data from the Centre for Distance Education at Athabasca University that revealed that recent mail surveys have resulted in response rates of approximately 50%.

The population of active students was divided into two categories: new and continuing students. The original random sample of 800 students consisted of 363 new students and 437 continuing students. New students were those who, at the time of the study, were enrolled in their first Athabasca University course and had not yet completed it. Continuing students were those who, at the time of the study, had successfully completed at least one course prior to the course or courses in which they were currently enrolled. The distribution of new and continuing students in the random sample was found to be identical to the distribution in the original population of active Athabasca University students. The random sample was generated from the Athabasca University student record system, producing only a mailing label. Student identification numbers were not used; no names were used other than for the purpose of mailing. When the mailing labels were generated, however, four labels did not have complete addresses and an attempt to obtain complete addresses through the Registry at Athabasca University was not successful. The questionnaire was sent out to 796 students; of these, three were returned undelivered. Therefore, the final sample consisted of 793 active students of Athabasca University. Table 1 shows the distribution of active students in these two groupings as reflected in the original population and in the random sample.

Survey Instrument

Dividing the sample of students into these two categories facilitated the design of the mail survey questionnaire. A single version of the survey instrument would have meant extensive branching within questions to allow for appropriate responses by both new and continuing students. Such an instrument

would have been cumbersome and students would have had difficulty working through the questionnaire in an expedient manner. Two versions of the survey instrument were therefore created. While the substance of the questions was identical for both, one version was worded appropriately for students who had previously completed a course, and the other for students who were enrolled in their first Athabasca University course. See Appendix 4 for the version of the questionnaire sent to new students and Appendix 5 for the version of the questionnaire sent to continuing students. The questionnaire provided for both quantitative and qualitative responses and it was organized to facilitate the later coding of quantitative responses for analysis using SPSSx.

One limitation of the questionnaire must be pointed out. Only library users were asked about the supplementary materials list. As a result, the awareness and use of the supplementary materials list may be understated.

A covering letter with the questionnaire provided students with a brief description of the research project. Participants were provided with a pre-addressed, postage paid envelope in which to return the completed questionnaire.

Anonymity and confidentiality were assured each student. Assurance was also given to each student that participation, or not, in the research study would not affect the library services provided to them. Students were advised that the information received through the survey would be used to complete the requirements for this thesis. See Appendix 3 for the covering letter that was included with each questionnaire.

Pretest of the Survey Instrument

The survey instrument was pretested by seven individuals at Athabasca University. Six of the seven pretest participants had taken an Athabasca University course. They pretested both versions of the questionnaire. A covering letter to the pretest respondents asked them to work through the questionnaire as if they had received it in the mail (see Appendix 2). They were asked to note any difficulties in following the instructions, ambiguities in wording, areas that were unclear, and to make suggestions to improve the

overall quality and effectiveness of the questionnaire. As a result of the pretest, a few minor changes were made to the questionnaire. For the most part, however, the pretesting was favorable and confirmed that the survey instrument was well organized and easy to work through.

The Survey

The questionnaires were mailed on March 11, 1991. Students were asked to complete the questionnaire and return it within a two-week period from the time of mailing, March 25, 1991, or as soon as possible. Three weeks following the mailing of the questionnaires, 236 had been returned. The last questionnaire was received on May 8, 1991.

A total of 269 questionnaires were returned, for an overall response rate of 34%. The response rate for new students was 25%; the rate for continuing students was 44%. Table 1 shows the response rates by category of student.

Table 1. Active Students — March 1991

Status of Students	Population		Final Sample		Respondents		Response Rate
	Number	Percent	Number	Percent	Number	Percent	Percent
New	4,005	55%	431	54%	109	41%	25%
Continuing	3,303	45%	362	46%	160	59%	44%
Total	7,308	100%	793	100%	269	100%	34%

Although the response rate of 34% was less than anticipated and attempts could have been made to solicit more responses, the decision was made to compile the results of the questionnaires returned from the one-time mailing. This was done because follow-up was impractical, given the fact that student identification records were not kept. Therefore, there was no way to identify and track the respondents and follow up with non-respondents. In addition, follow-up was not conducted because of the extra time and

expense that would have been required. Finally, as was pointed out, the sample size required for a population of 7,000 cases to attain a confidence level of 90% and a permissible error of ±0.05 is 261 cases.

It should be pointed out that if future studies are conducted of Athabasca University students with respect to library services, a means of follow-up of non-respondents should be incorporated into the survey. This could be done by tracking student identification numbers of respondents and then sending a follow-up reminder to non-respondents.

Analysis of the Data

The 269 questionnaires were coded and entered into a datafile for analysis on SPSSx. See Appendix 6 for the coding structure that was used for both versions of the survey instrument. Frequency distributions were generated for all coded variables. Cross tabulations of selected variables were also generated. For the variable of "course enrolled in," the specific courses reported by respondents were recoded and grouped into disciplines, for example, BIOL, ENGL, PSYC. The disciplines were then grouped according to faculty of study, that is, Faculty of Administrative Studies, Faculty of Arts, and Faculty of Science.

Written comments provided by respondents on several questions were entered into a flat ASCII text file, and compiled into separate files using an AWK program on the UNIX system. The written comments by respondents provided descriptive and illustrative information that otherwise would not have been available. See Appendix 7 for the coding program for the open comments.

Chapter IV

Findings

The findings are presented as follows:

1. Characteristics of active Athabasca University students,
2. Student awareness and use of library materials,
3. Student awareness and use of the supplementary materials list, and
4. Student awareness and use of computers.

1. Characteristics of Active Athabasca University Students

Students were asked to provide information on the questionnaire that would help determine typical characteristics of Athabasca University students in the survey sample. Specifically, students were asked to identify their age, gender, level of previous education, number of Athabasca University courses in which they were enrolled, number of courses completed, and the faculty in which they were enrolled.

Age: As Table 2 below shows, almost half of the 268 respondents were 30 to 39 years of age. The next largest age group represented was 20 to 29 years of age. There were more respondents 50 years of age and over than there were under 20. This is unlike a traditional university, in which the majority of students enter following graduation from high school. The student body of Athabasca University is typically older and comprised of students who are already in the work force, perhaps married and with families, settled in their communities, but who for various reasons want to take university courses.

Gender: Female respondents outnumbered male respondents by a ratio of 2 to 1. There were 185 females and 82 males who responded to the survey (see Table 2).

Previous education attained: Responses ranged from elementary education to having earned a post-secondary degree. As Table 2 shows, only 1% of 266 respondents had attained less than a secondary level of education, while most students had taken some post-secondary courses and earned a diploma, degree, or another credential. This is noteworthy because there is no academic requirement to meet for

admission to Athabasca University. Almost all students (99%), however, have attained at least a secondary level of education.

Table 2. Characteristics of Student Respondents

Characteristic	Students Number	Percent
Age		
Under 20 years	6	2%
20 - 29 years	70	26
30 - 39 years	128	48
40 - 49 years	51	19
50 - 59 years	9	3
60 - 69 years	4	2
	268	100%
Gender		
Male	82	31%
Female	185	69
	267	100%
Previous education attained		
Elementary	3	1%
Secondary	10	4
Post-Secondary courses	91	34
Diploma	104	39
Degree	46	17
Other	12	5
	266	100%

Athabasca University course enrolments: Table 3 below shows that, at the time of the survey, three-quarters of the respondents were enrolled in one Athabasca University course. At the other extreme, one student was enrolled in six courses. Twenty percent of the respondents were taking either two or three courses at the same time.

Athabasca University courses completed: A question was asked to verify student status at Athabasca University; that is, whether respondents were new or continuing students (having completed at least one Athabasca University course prior to this survey). As Table 3 shows, out of 266 respondents, 108

students (or 40%) indicated that they were taking their first Athabasca University course. Almost one-quarter of the respondents had completed either 1 or 2 courses while eight percent had completed 10 or more courses. The 40/60 split of student respondents is in direct proportion to the split of students in the original random sample and to the population of active Athabasca University students. In both the random sample and the population of active students the division of new and continuing students was approximately 45% and 55%, respectively (see Table 1).

Faculty enrolment at Athabasca University: Respondents were asked to identify the faculty of study in which they were enrolled. Students are not required to declare a faculty upon registration, but those intending to earn a certificate or degree must enrol in a faculty. Out of 268 respondents, Table 3 shows that about 40% of the students were undeclared; that is, they were taking a course but had not identified a program of study. Students in this category are enrolled in their first course and this course may be taken for the sake of interest. On the other hand, almost 60% had declared a faculty at the time of this study and it may therefore be assumed that they intend to earn a certificate or degree. In descending order, faculties having the most students were: Administrative Studies (32%), Arts (18%), and Science (9%).

Students were asked to identify the course they had most recently completed, or the course in which they were currently enrolled if they were new students. A total of 84 Athabasca University courses were identified by 240 respondents. (See Appendix 8 for the complete list of courses represented in the sample and the number of student respondents taking each course.) The most popular courses among respondents were as follows:

MATH 215: Introduction to Statistics (13 respondents)
ADMN 232: Introduction to Administrative Principles (12 respondents)
BIOL 230: Human Physiology (11 respondents)
ACCT 253: Introduction to Accounting (10 respondents)
PHIL 252: Critical Thinking (10 respondents)
PSYC 289: Introduction to Psychology (10 respondents)

Table 3. Student Enrolment Characteristics		
Characteristic	Students Number	Percent
AU courses enrolled in		
One	203	76%
Two	41	15
Three	14	5
Four	5	2
Five	2	1
Six	1	1
	266	100%
AU courses completed		
None (new students)	108	40%
One	36	13
Two	28	10
Three	23	9
Four	15	6
Five	16	6
Six	7	3
Seven	6	2
Eight	7	3
Nine	2	1
Ten or more	20	8
	268	100%
Faculty in which enrolled		
Administrative Studies	86	32%
Arts	48	18
Science	24	9
Undeclared	110	41
	268	100%

Table 4 shows the courses taken by respondents grouped according to academic discipline. The most popular disciplines were Psychology (almost 13% of the respondents), English (almost 8%), Administration (just over 7%), and Mathematics and Biology (about 6% each).

Table 4. Course Registrations of Respondents Grouped by Academic Discipline		
Discipline	Students Number	Percent
Psychology	32	12.7%
English	20	7.9
Administration	18	7.1
Biology	16	6.3
Math	16	6.3
Accounting	15	5.9
Economics	14	5.6
French	14	5.6
Sociology	12	4.8
History	11	4.4
Philosophy	10	4.0
Communications	9	3.6
Anthropology	8	3.2
Nursing	8	3.2
Finance	7	2.8
Organizational Behaviour	6	2.4
Political Science	6	2.4
Computer Science	5	2.0
Legal Studies	5	2.0
Geography	2	.9
Humanities	2	.8
Industrial Relations	2	.8
Management Science	2	.8
Marketing	2	.8
Nutrition	2	.8
Sociology/Anthropology	2	.8
Taxation	2	.8
Women's Studies	2	.8
Applied Studies	1	.3
Geology	1	.3
Total	252	100.0%

Table 5 shows the number of course registrations grouped according to the faculty from which the courses were offered. Just over half of the respondents, 133 students, were enrolled in a Faculty of Arts course. Another 27% of the respondents were enrolled in a Faculty of Administrative Studies course, and

20% in a Faculty of Science course. It should be pointed out that students in one faculty must take courses offered by another faculty, not only for interest sake, but to fulfill program requirements.

Table 5. Course Registrations of Respondents Grouped by Faculty of Study

Faculty	Students	
	Number	Percent
Administrative Studies	68	27%
Arts	133	53
Science	51	20
Total	252	100%

A composite of the typical Athabasca University student, gathered from respondents, is as follows. The typical student is female, between the ages of 30 and 39, and has taken some post-secondary courses prior to enrolling in studies at Athabasca University. The typical student is a continuing student, that is, she has already completed at least one Athabasca University course, and is enrolled in only one Athabasca University course at a time. This composite corresponds with previous ones.

Smyrnew (1983) reported that for the year 1981/82 there were 62% females and 38% males admitted to Athabasca University. Over two-thirds of the students were 25 to 44 years of age (p. 6). The pattern had not changed five years later. Appavoo and Hansen (1988) reported, on the basis of data gathered by the Centre for Distance Education at Athabasca University, that two-thirds of all students were between the ages of 25 and 44, and women represented two-thirds of all registered students (p. 13).

Smyrnew (1983) reported also that high school education had been attained by 89% of newly admitted students, while 67% also had some post-secondary education (p. 6). The profile of the typical student has improved dramatically since 1983 in the area of education attained prior to being admitted to Athabasca University. In the current study, 95% of the respondents have some education beyond the secondary level.

2. Student Awareness and Use of Library Materials

Students were asked to provide information on the questionnaire that would help to determine their awareness of Athabasca University Library and use of library materials to complete their courses.

Almost all respondents said that they were aware that Athabasca University provides library services to registered students. A total of 233 respondents (or 87%) reported an awareness of Athabasca University Library. Moreover, 148 students (55%) reported that they knew the procedures for requesting materials from Athabasca University Library. A total of 90 respondents (36%) indicated that it is essential to use library materials to complete an Athabasca University course.

Table 6 shows relatively low library use by students: overall, only 21% of 265 respondents borrowed library materials for the course they had just completed or in which they were enrolled at the time of the survey. Among the library users, new and continuing students were represented in almost equal proportions, 21% and 22% respectively. Because there was no follow up of non-respondents, their incidence of library use may very well be substantially lower than the 21% of respondents that reported they were library users. The Appavoo and Hansen study (1988) found that 9% of all randomly selected students were library users; there were no non-respondents. The issue of which figure accurately reflects library use of Athabasca University students is unresolved by this study because of the earlier methodological decision made not to track non-respondents.

Table 6. Student Use of Library Materials

Library Material Borrowed	Students					
	New		Continuing		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	22	21%	34	22%	56	21%
No	85	79	124	78	209	79
Total	107	100%	158	100%	265	100%

Looking at library use according to academic discipline, the highest proportion of respondents who

reported library use were taking courses in Political Science (83%). The disciplines of French, Humanities, Nursing, Sociology/Anthropology, Taxation, and Women's Studies each had percentages of 50% who reported that they borrowed library materials. Psychology, English, and French are the disciplines in which the highest absolute number of respondents said they borrowed library materials (9, 7, and 7 respectively).

Table 7. Student Use of Library Materials by Academic Discipline

Discipline (respondents)	Library Materials Borrowed by Students			
	Yes		No	
	Number	Percent	Number	Percent
POLI (6)	5	83%	1	17%
FREN (14)	7	50%	7	50%
HUMN (2)	1	50%	1	50%
NURS (8)	4	50%	4	50%
SOAN (2)	1	50%	1	50%
TAXX (2)	1	50%	1	50%
WMST (2)	1	50%	1	50%
ENGL (20)	7	35%	13	65%
PSYC (32)	9	28%	23	72%
HIST (11)	3	27%	8	73%
ANTH (8)	2	25%	6	75%
ACCT (15)	3	20%	12	80%
BIOL (16)	3	19%	13	81%
ORGB (6)	1	17%	5	83%
ADMN (18)	2	11%	16	89%
COMM (9)	1	11%	9	89%
PHIL (9)	1	11%	8	89%
SOCI (12)	1	8%	11	92%
ECON (14)	1	7%	12	93%
APST (1)	0	0%	1	100%
COMP (5)	0	0%	5	100%
FNCE (7)	0	0%	7	100%
GEOG (2)	0	0%	2	100%
GEOL (1)	0	0%	1	100%
IDRL (2)	0	0%	2	100%
LGST (5)	0	0%	5	100%
MATH (15)	0	0%	15	100%
MGSC (2)	0	0%	2	100%
MKTG (2)	0	0%	2	100%
NUTR (2)	0	0%	2	100%
Total (250)	54	22%	196	78%

Table 7 shows percentages of students, in descending order, in each academic discipline who borrowed library materials for the course they had completed or in which they were enrolled at the time of this study. (Appendix 9 shows student use of library materials by academic discipline in alphabetical order.)

Table 8 shows that students who were taking a Faculty of Arts course at the time of the study reported the highest percentage of library use, 30%, followed by students who were taking a Faculty of Science course, and, finally by students taking a Faculty of Administrative Studies course. Similarly, the highest absolute number of students (39) who borrowed library materials were taking a Faculty of Arts course. It is noteworthy that students taking a Faculty of Arts course were above the percentage of students who borrowed library materials while students who were taking a Faculty of Administrative Studies or a Faculty of Science course were substantially below the percentage of all respondents who reported that they borrowed library materials.

Table 8. Student Use of Library Materials
On the Basis of Course, Grouped by Faculty

Faculty (respondents)	Library Materials Borrowed by Students			
	Yes		No	
	Number	Percent	Number	Percent
Administrative Studies (68)	8	12%	60	88%
Faculty of Arts (132)	39	30%	93	70%
Faculty of Science (50)	7	14%	43	86%
Total (250)	54*	22%	196	78%

*This figure is less than the 56 respondents who reported that they borrowed library materials because 2 library users did not identify the course they were taking.

Several comments made by non-users of library services suggested that the course materials package contained sufficient materials to complete most courses. Some students commented that they had their own reference works on various subjects which they used to help complete their course work. Selected

comments made by non-users with respect to why they did not borrow library materials are provided below.

> "I did not feel the need to read any other materials for this course. There was more than enough reading involved with the course as it was."
>
> "My course was very self-contained and I did not need any other materials."
>
> "The course did not require any research."
>
> "In the past, I found the books were not what I needed. I am NOT paying long distance charges to add to the cost of an already expensive course. The mail is too slow to depend on it."

Respondents who reported that they borrowed library materials for their courses were asked to identify the types of library materials they used. Table 9 shows the type of library materials used by the 56 responding library users, indicating both the number and percentage of users. Of all library users, 35 reported that they used monograph materials. Examples of materials in the "other" category include the model brain, the molecular kit, computer software, and kits of physical examination instruments.

Table 9. Type of Library Materials Used

Type of Material	Library Users* Number	Percent
Books	35	63%
Journal articles	12	21%
Video materials	14	25%
Audio materials	11	20%
Other materials	4	7%

*n=56

Library users were asked to identify whether they used Athabasca University Library or other libraries. Table 10 shows that of the 56 respondents who used library materials, 44 reported that they used Athabasca University Library, 21 used other libraries, and 9 used both Athabasca University Library and a library in their own community.

Table 10. Type of Library Used		
Library Used	Library Users* Number	Percent
Athabasca University Library	44	79%
Other Library	21	38%
Both	9	16%
*n=56		

Students who borrowed library materials were asked to indicate how they selected them, for example, on the basis of topic, specific items, or a combination of both topic and specific items. While most Athabasca University courses include a supplementary materials list, students may select specific materials from this list or they may select materials on the basis of the subject or the assignment. Table 11 shows that, from among all library users, 34 students selected materials on the basis of a specific item or on the basis of a subject. A total of 17 students reported that they selected library materials on the basis of both a specific item and a subject.

Table 11: Type of Selection of Materials Made by Library Users		
Selection Type	Library Users* Number	Percent
Specific Item	34	61%
Subject	34	61%
Both	17	30%
*n=56		

The advantage of selecting specific materials on the basis of topic or subject matter is that although students may have a preference for specific titles, not all titles may be available at the time the student wishes to borrow them. Other items, then, may be substituted for the materials specifically selected if the

students identify their subjects. It is believed that students would prefer to borrow materials on their subjects rather than to receive no materials at all (if, for example, a student selects specific items and the items are not available for loan). Students who choose to borrow materials on the basis of subject matter can then proceed with their coursework rather than waiting for specific materials to be returned to the Library.

Students who borrowed materials from Athabasca University Library were asked how they made their requests for library materials. Requests for materials can be made by telephone, mail, FAX, or in person. Table 12 shows that, at the time of the study, telephone and mail requests were used most frequently by Athabasca University Library users, 70% and 30% respectively.

Table 12: Type of Request Made by Students Who Used Athabasca University Library

Request	Students*	
	Number	Percent
Telephone	31	70%
Mail	13	30%
In-person	6	14%
FAX	2	5%

*n=44

Students who used Athabasca University Library were asked how many requests for library materials they made while taking their course. Table 13 shows that most students made only one or two requests for library materials. One student reported making ten requests for library materials from Athabasca University Library in a single course.

Respondents who were Athabasca University library users were asked if they were satisfied with the materials they received from Athabasca University Library and if they were satisfied with the time it took for the materials to arrive following the request. Table 14 shows that almost all of the respondents were satisfied or partially satisfied with both the materials they received and the time taken for delivery.

Table 13. Requests for Library Materials By Students Who Used Athabasca University Library		
Requests	Students Number	Percent
One	16	39%
Two	9	22
Three	8	19
Four	3	7
Five	3	7
Six	1	2
Seven	0	0
Eight	0	0
Nine	0	0
Ten or more	1	2
Total	41	100%

Table 14. Student Satisfaction with Library Materials Received from Athabasca University Library		
Satisfaction with Library Materials	Students Number	Percent
Yes	31	76%
No	2	5
Partially	8	19
Total	41	100%
Time of Delivery		
Yes	31	82%
No	4	10
Partially	3	8
Total	38	100%

While most respondents who used Athabasca University Library indicated that they were pleased or partially pleased with the materials they received, a few students commented that some photocopied materials arrived with pages missing. Another commented that the quality of audio/visual materials was

poor. Another student commented that the book requested was out on loan and consequently a long wait for the materials was necessary. However, favorable comments outnumbered unfavorable, as the following excerpts from the questionnaires show:

> "I was pleased that not only was I sent the books I requested specifically, I was sent several related books and a wonderful book with a feminist theme written by men."
>
> "Materials were varied and fairly comprehensive."
>
> "The reason that I am taking time to respond is because I felt that they did a good job in helping me."
>
> "Materials were received quickly and in excellent condition."
>
> "Materials received very promptly. Usually received materials 2 days after I have sent my FAX."
>
> "Yes, most material was here within a week."

One student reported that the books did not arrive as anticipated, and another student reported that it took months for the books to arrive. Generally, however, students expressed satisfaction.

Students who had indicated that they used Athabasca University Library and were enrolled in two or more course or had completed two or more courses were asked if the experience they were describing on the questionnaire was typical of their other courses. Seventy-five percent said yes. This suggests that the materials in the Athabasca University Library collection meet the study needs of students and that the level of service provided to students is consistent.

In summary, almost all respondents to the survey were aware that Athabasca University provides library services to its students. While just over 35% of the respondents believed that library materials are essential to complete an Athabasca University course, only 21% of the respondents reported that they actually used library materials. Of the respondents who were library users, almost 80% used Athabasca University Library and 30% used other libraries. Monograph material was the most frequent type of material borrowed. Students who used Athabasca University Library reported that they placed their requests by telephone or mail. Most students made only one or two requests for material from Athabasca University Library and were satisfied with both the materials they received and the time it took for the materials to be delivered.

3. Student Awareness and Use of the Supplementary Materials List

The 56 students who indicated that they used library materials were asked specific questions about course supplementary materials lists. These questions concerned whether their course had a supplementary materials list, whether titles on the supplementary materials list were relevant to the course, whether they borrowed titles on the supplementary materials list from a library other than Athabasca University Library, and whether they considered the supplementary materials list to be an essential component of the course package. Because only library users were asked questions about the supplementary materials list, it must be pointed out that students may have have been aware of the supplementary materials list and used it for purposes other than those specifically related to library use.

Two-thirds of all library users (37) indicated that their course had a supplementary materials list. This proportion was corroborated through a manual check of the Athabasca University Library documentation for all courses identified by respondents. It was found that, of the 84 courses identified by respondent library users in this study, 59 actually had a supplementary materials list. Appendix 10 is a list of the courses identified in the survey as having a supplementary materials list, the number of students in the course, and the number of students who recognized the supplementary materials list. In only 10 courses did all the students recognize that a supplementary materials list was included.

When grouped by the faculty offering the courses, it is interesting to note, as Table 15 shows, that 96% of the Arts courses had a supplementary materials list, followed by almost half of the Science courses. Of Administrative Studies courses, only 32% had a supplementary materials list.

Table 15. Courses Having a Supplementary Materials List, Grouped by Faculty Offering the Course		
Faculty (n courses)	Courses Number	Percent
Administrative Studies (22)	7	32%
Arts (47)	45	96%
Science (15)	7	47%
Total (84)	59	70%

Table 16 shows the number of library users, grouped by the faculty offering the course they were taking, who found a supplementary materials list in their course package.

Table 16. Library Users Recognizing Supplementary Materials List, Grouped by Faculty Offering the Course		
Faculty (n students)	Students Number	Percent
Administrative Studies (8)	1	13%
Arts (39)	29	74%
Science (7)	5	71%
Total (54*)	35*	65%
*These figures are less than the total number of library users because 2 respondents did not identify their course		

A question was asked of library users to determine whether they borrowed titles identified on the supplementary materials list from a library other than Athabasca University Library. Of the total of 13 students who responded, 10 reported that they were successful in borrowing supplementary materials from another library. This indicates that although library services are available to students, some also use libraries in their local communities. It is interesting to know that items on the supplementary materials list may be available from sources other than Athabasca University Library and that students try to obtain them

elsewhere.

The three students who were not successful in obtaining items on the supplementary materials lists from another library were asked why. The reasons were that the materials were all out or that the materials were not available from the particular library.

Respondents who were library users were asked if they thought the supplementary materials list was an essential component of the Athabasca University course package. Most of the respondents (29 out of 37) said yes.

Comments gathered from the survey questionnaire indicated that most students believe that the supplementary materials list is essential to the course package. A comment made by one student was that the supplementary materials list can enable a student to seek clarification of the subject. Another student commented that the supplementary materials list is helpful for completing assignments as it gives direction for research or it provides for a chance to broaden perspectives regarding the course. Other selected comments echoed these ideas. One student said that material can be used throughout a lifetime for learning. Another said that the supplementary materials list helps a person look for materials needed for the course without spending a lot of time. The supplementary materials list, as one student commented, is very handy and very time-saving.

While students who were library users believe that the supplementary materials list is essential and the use of supplementary materials is important, the reality is that most students do not use supplementary materials. For example, one student said, "I suppose I never really had need to examine the list." Other students similarly commented that they had no time to follow up on them. One student said "I found myself rushed to get through this course due to other pressures in my life."

Library users who used the supplementary materials list provided comments that indicated that for them it is essential to the course and the materials listed were relevant to the course. Some selected comments were as follows.

> "The materials mentioned would help a person understand the material better."
>
> "The supplementary materials gave me a start when looking for books in my local libraries—even if I didn't find them."

"I would have had some difficulty in writing the necessary essays without the resource material."

"I find it somewhat difficult to study alone at home rather than sharing ideas, etc. in the classroom. The supplemental materials are a real bonus for me."

"If you need materials for the assignment this list is very helpful to get books or articles about topics which were only partially covered in the course."

"Most materials can be found at your local public library (at least in the city)."

"Questions in the workbook often have answers only found in the supplementary material."

"The choice of texts and the elaborative materials in the guides is first rate."

Of the courses identified by library users 70% had a supplementary materials list. Among Faculty of Arts courses, 96% had a supplementary materials list while only 74% of the students taking those courses said their course had a supplementary materials list. The closest proportion of courses with a supplementary materials list and students who said their course had a supplementary materials list was among courses offered through the Faculty of Science. In all faculties, it was found that there were courses without a supplementary materials list and there were students who did not identify the supplementary materials list in the course.

It was found that the percentage of courses that had a supplementary materials list (70%) was higher than the percentage of library users that recognized the supplementary materials list in their course (65%). The proportion of library users that said the supplementary materials list was essential to their course (29 out of 37) was higher than the proportion of library users that said their course had a supplementary materials list (35 out of 54). The perception that the supplementary materials list is essential to the course package, then, was greater than the actual recognition of the supplementary materials list in the course package.

In summary, library users were asked about their awareness and use of the supplementary materials list. A total of 54 student library users identified their course and 35 of those said their course had a supplementary materials list. Grouped by faculty, library users taking an Arts course had the highest percentage (74%), of students reporting their course had a supplementary materials list. Students taking a Science course had the next highest percentage (71%), while only 13% of students in an Administrative Studies course reported that their course had a supplementary materials list.

Library users were asked whether the supplementary materials list was an essential component of the course package. Of 37 respondents, 29 said yes. The majority of comments made by respondents were favorable and most respondents, although not necessarily having time to use supplementary materials, recognize the value of the use of the supplementary materials list to their course.

A total of 84 courses were identified by library users; a supplementary materials list was found to be included in 59 of them. When grouped by faculty offering the course, almost all Faculty of Arts courses had a supplementary materials list (96%). Faculty of Science courses had the next highest proportion, followed by Faculty of Administrative Studies, 47% and 32% respectively.

4. Student Awareness and Use of Computers

With respect to the use of computers, all students were asked to indicate whether they owned or had access to a computer. Table 17 shows that two-thirds of the students said they either own or have access to a computer. One-quarter of those students who owned or had access to a computer also had use of a modem which would be required for remote access to AUCAT, the online public access catalog of Athabasca University Library. Among students who owned or had access to a computer, continuing students and new students were well represented, 63% and 75% respectively. It is interesting to note that a slightly higher proportion of new students reported that they owned or had access to a computer than did continuing students. While fewer students had a modem with their computer, continuing students and new students were almost equally represented, 28% and 24% respectively.

Almost half of all student respondents indicated that they had used a computerized library catalog. However, only sixteen students indicated that they knew AUCAT, the Athabasca University Library Catalog, was on computer. This figure is not surprising as AUCAT has not been advertised. It must be pointed out, however, that students are informed that AUCAT is available for their use at the Learning Centres. Comments provided on the questionnaire affirmed, however, that students are eager to access the Library catalog on a remote basis if possible.

Table 17. Student Access to Computer and Modem						
Computer	Students					
	New		Continuing		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	71	66%	100	63%	171	65%
No	36	34	58	37	94	35
Total	107	100%	158	100%	265	100%
Computer With Modem	Students					
	New		Continuing		Total	
	Number	Percent	Number	Percent	Number	Percent
Yes	16	24%	29	28%	45	27%
No	51	76	73	72	124	73
Total	67	100%	102	100%	169	100%

Many students made comments about how remote access to the Library catalog might affect their studies at Athabasca University. Of the 193 comments, 107 (55%) were positive and suggested that remote access to AUCAT would enhance or improve studies at Athabasca University. The remaining comments were neutral, indicating that remote access would make no difference in studies at Athabasca University. The following selection of comments represented student views in general.

"It would be grand. I would get a modem for sure."

"In a word: ENHANCE."

"Information at your fingertip (how great!)."

"Would make me more aware of pertinent data."

"It would make selection of appropriate material easier and faster."

"Access to the library catalog will definitely be an asset as I proceed to higher levels of study where extra materials will be necessary to understand more complex ideas."

"Access through remote would would tell me quickly what the Athabasca Library contains. I would likely borrow more materials from Athabasca with remote access."

"With remote access to the Athabasca University Library Catalog I would probably be able to find out how much additional information was available on a particular topic."

"Excellent idea!! I would purchase a modem specifically for AU courses."

"I can't afford a computer. I wish I could. It would greatly increase my academic efficiency."

"I don't think this type of access would affect my studies at all. The suggested lists of supplementary reading are probably sufficient. I don't feel a need to peruse the library catalogues, at

this point, anyway."

"In my situation it wouldn't make a difference."

"I'd have to investigate it."

"It would be great for those with access, but may give an advantage to only a few."

"No effect at this time."

"I'm not sure how this system works."

On the basis of the number of students who own or have access to computers and on the basis of student comments supporting remote access to the library catalog, it would seem timely to implement remote access to AUCAT by students. However, when remote access is in place and evaluation of the effectiveness of the online library catalog is conducted, it will be interesting to determine whether the actual use of the library catalog follows the apparent anticipation of access to AUCAT that is evident in this study. The present study indicates that while 87% of the respondents to the survey indicated that they were aware of library services available to Athabasca University students, only 21% actually used library materials and only 16% used materials from Athabasca University Library. Similarly, while 41% of the respondents to the survey indicated that library materials are essential for success in Athabasca University courses, only 21% actually used library materials.

Unlike the supplementary materials list which is static upon production (until the next course revision), AUCAT is dynamic, as materials are continually added to the library holdings. AUCAT would be comprehensive while the supplementary materials list is selective. Furthermore, upon accessing AUCAT, students could verify the circulation status of specific items of interest to them.

It is not expected that the supplementary materials list would be eliminated or replaced in the near future, as there are students who do not, for various reasons, own or have access to computers and modems. It would not be in the Library's best interests to suggest elimination of the supplementary materials list and possibly create a barrier to a student's use of the library. Rather the Library should promote awareness and use of the supplementary materials list. It is anticipated that remote access to AUCAT will facilitate access to the library catalog, and enhance the provision of library services to Athabasca University students.

Summary of Findings

The typical student is 30 to 39 years of age, is female, and is taking her first Athabasca University course. She is most likely enrolled in a Faculty of Arts course.

Almost all students are aware that library services are provided by Athabasca University to Athabasca University students, and more than half know the request procedure for obtaining materials from Athabasca University Library. One-third of the students indicated that the use of library material is essential to courses taken at Athabasca University. At the same time, however, most students do not use library materials for their courses. Among those who do, most of them used Athabasca University Library, while a few used local libraries. Most students who borrowed materials from Athabasca University Library were satisfied with both the material and the time it took for the material to arrive.

It was found that some library users made use of the supplementary materials list that accompanies most Athabasca University course packages. Over half of the library users indicated that the supplementary materials list is an essential component of the course materials package and that it contained items that were relevant to their courses.

The majority of students own or have access to a computer and modem and, according to their comments, would make use of remote access to AUCAT, the online public access catalog of Athabasca University Library so they can search the holdings of the library and then request material.

Chapter V

Discussion

It was anticipated at the outset of this study that the findings would be of benefit to Athabasca University Library, to course development teams at Athabasca University, and to individuals working in the specialization of distance education librarianship. Some assessment of the study's implications is presented below for each of these areas.

Athabasca University Library

The findings presented in this thesis indicate that 21% of active Athabasca University students have used library materials, and most of them used Athabasca University Library. At the same time, 87% of the students were aware that library services are available to them and 55% knew the procedures to request materials from Athabasca University Library. These figures follow a similar pattern reported in the study of Massey University students. Auger and Tremaine reported that 95% of the respondents to their survey knew about the library services provided by Massey University while only 43% of the respondents reported that they borrowed library materials from the Massey University Library (Auger and Tremaine, 1987, p. vi). A requirement of students to use library materials for their course work would result in an increase of the percentage of student use of library materials and thus narrow the gap between student awareness of library services and the actual use of library materials.

While positive comments were made by students about the library services provided to them, it is important that efficient, expedient, and prompt service be maintained. It is important that at least a minimal reference interview be conducted by the library staff member with the student whenever possible. By doing so, the library staff member who takes the student's request will have a better understanding of the student's request; if the student then requests specific material and the materials are available, the request can be filled; if, on the other hand, the materials are not available, a selection of substitute materials can be sent to the student. This is only possible when the subject of the student's request is known.

It is essential that a student complete his or her first Athabasca University course if there is to be any chance of the student taking further studies towards a certificate or degree through Athabasca University. Most students are currently enrolled in one course. This suggests that students try to take an Athabasca University course for a variety of reasons. This "first" experience, therefore, must be positive; success in the first course must be cultivated. Only when there are returning students, when there are increases in the number of students taking more than one course, or having completed more than one course, and when students indicate that they are taking certificate and degree programs will Athabasca University be able to claim it is meeting the objective identified in the *Athabasca University Mission Statement*, namely facilitating student success in university-level studies.

On the basis of student comments, Athabasca University and the Library should proceed to initiate and establish the necessary protocols, procedures, and technical requirements for remote access by students to the library catalog. That well over half of all students in the sample indicated they own or have access to a computer suggests that students are waiting for remote access to the catalog to be made available to them.

With respect to the supplementary materials list, it is suggested that it be maintained as an integral component of the course package and that more awareness and use of it be promoted. Promotion of the supplementary materials list could be accomplished by providing more information about it to students in the description of library services, through orientation materials, and through the use of specific direction to the supplementary materials list in the course materials.

The Library must be more active in the selection process of materials to be included on the supplementary materials list so the collection will support all Athabasca University courses and the library staff will be familiar with titles in the collection. The Library should maintain and endeavor to improve the selection process for materials added to the collection. It is important that there be sufficient supplementary materials to support each course offered by Athabasca University.

It is important that the Library work closely with course development teams, improve dialog with them, and endeavor to have a more complete understanding of the course development process, and the objectives of each course. At the same time, it is important that course development teams understand

more fully how the Library functions and the significance of library research to a university-level education to ensure that appropriate and sufficient materials are in the collection when the course is developed. While it is essential that library staff have at least a minimal level of understanding of the objectives and the assignments for each course if they are to select library materials to send to students to help them complete assignments, it is also essential that the course coordinator and appropriate team members have at least a minimal understanding of how the library can support the course for which it is responsible. The result of more proactive input by the Library at the preliminary stages of course development will mean the Library will not have to "catch up" when the course is open and there are requests by students for materials. Rather, the Library will be ready to meet the information needs of students in Athabasca University courses.

Course Development Teams at Athabasca University

While the findings indicate that 21% of the students used library materials, and well over half of the courses identified had a supplementary materials list in the course package, not all students knew the course had a supplementary materials list. It may be overly simplistic to state that more students should be made aware of the supplementary materials list. The supplementary materials list could, however, be introduced in the prelimary portion of the course materials and mentioned at several points in the course materials. It would be expected that students then, who were not sure what the supplementary materials list is, would look for it and thus be made aware of it. It is important that all courses at Athabasca University include a requirement that each student develop a basic level of library research skill.

Students, as evidenced in their responses to the survey, indicate that they receive sufficient materials in the course package to complete the course. The complete course package is a positive aspect of courses offered by Athabasca University. However, the complete course package must not, nor can it be, a substitute for the development of independent research skills. Course development teams should re-evaluate the concept of the complete course package and determine if it should remain fundamental to the way Athabasca University delivers its courses. With respect to library services, however, each course package should include a more definitive introduction to Athabasca University Library and library use in

general. This will especially be necessary should remote access to AUCAT be extended to students. At that time it will become necessary that comprehensive instructions be included in each course package for connecting to the online catalog, searching the catalog for appropriate materials, and borrowing materials.

Rather than replacing the supplementary materials list with remote access to AUCAT, more attention must be given to the supplementary materials list. The supplementary materials list should remain integral to, if not become more integral, to the course materials package. The supplementary materials list should serve as a reference tool from which students should be encouraged to begin their library research. Through the preliminary pages of each course, the student should be introduced to the supplementary materials list and other library services available to him or her that would contribute to and/or enhance the educational experience. In so doing, success in studies will be cultivated and most likely promoted.

It is necessary that any information the Library would want to make available to students be incorporated into the course package. This would require close cooperation between the Library and the course development teams.

Distance Education Librarianship

The findings of this study indicate that almost all students of Athabasca University are aware of library services available to them. While the course materials package may be sufficient, students do avail themselves of library materials as needed.

This study suggests that distance education students have computers and are prepared to access library catalogs and increase their awareness and use of library materials.

The provision of library service to distance education students is complex. While students are aware of library services, the coursework may not require them to actually use library materials. While students may believe that the use of library materials is essential to complete a course, relatively few students actually use library materials to complete their courses. It is clear that the Library should continue its present course in meeting the challenge of removing barriers that would traditionally restrict access to and success in university level studies.

Distance education librarianship is a particularly unique specialty. One of the requirements to successfully providing library services to students is to first of all educate and inform them that library services are available. Students then must be informed not only of the library services of the institution in which they are enrolled, but of additional services that may be available to students in their communities. There is a need, in general, for library and/or bibliographic instruction in all educational settings.

There are opportunities for institutions to cooperate in the provision of library services to students and engage in a collective, more universal or cooperative approach to education. This could simply mean that library services, especially borrowing privileges, be made available to students other than those of the specific institution in which they are enrolled. It is hoped that this thesis will contribute to that and other goals in the distance education movement.

Bibliography

Allen, G. G. (1982). "The role of the library in higher education and the implications for the external mode of study: An Australian perspective." *Higher Education* Vol.11,no.5(Sept. 1982):531-542.

Appavoo, Patricia J. (1986). "Athabasca University Library comes of age — A case study of planning for and coping with change." Paper presented at the Off-Campus Library Services Conference (Reno, Nevada, October 23-24, 1986). Mount Pleasant, Michigan: Central Michigan University Press.

Appavoo, Patricia J. (1985). "Library and information access in distance education: The role of technology." Paper presented at the International Council for Distance Education, Thirteenth World Conference (Melbourne, Australia, August 13-20, 1985) (ERIC Document ED 285 608).

Appavoo, Patricia J., and Lorin Hansen (1988). "Profile of the distance education library user." Paper presented at the Off-Campus Library Services Conference (Charleston, South Carolina, October 21-22, 1988). Mount Pleasant, Michigan: Central Michigan University Press.

Athabasca University (1985). *Mission Statement and Long-Term Plan*. Athabasca: Athabasca University.

Auger, Philippa, and Marianne Tremaine (1987). *Users and Non-Users: An Investigation Into the Reasons why the Majority of Extramural Students at Massey University do not Use the Extramural Library Service* (Massey University Library Series, No. 19). Palmerston North, New Zealand: Massey University Library.

Burge, Elizabeth J., Judith Snow, and Joan Howard (1989). "Interactive libraries: Dimensions of interdependence." Paper presented at the International Council for Distance Education Conference (Cambridge, England, September 19-22, 1989) (ERIC Document ED 311 907).

Burge, Elizabeth J., Judith E. Snow, and Joan L. Howard (1988). *Developing Partnerships: An Investigation of Library-based Relationships with Students and Educators Participating in Distance Education in Northern Ontario*. Toronto: Ontario Institute for Studies in Education.

Crocker, Christine (1986). "Getting it right down under: Off-campus library services in Australia." Paper presented at the Off-Campus Library Services Conference (Reno, Nevada, October 23-24, 1986). Mount Pleasant, Michigan: Central Michigan University Press.

Crocker, Christine, and Craig Grimison (1989). *Library Services for External Students: A Guide*. Sydney: Library Association of Australia.

Dale, Sheila, and Guus Schippers (1987). "Back-up resources for distance learning: Overview and examples from the Dutch and British Open Universities." Paper presented at the 53rd International Federation of Library Associations (IFLA) General Conference (Brighton, England, August 16-21, 1987) (ERIC Document ED 299 998).

Fisher, Raymond (1985). "Off-campus students and readings: A yardstick of academic standards?" Paper presented at the Off-Campus Library Services Conference (Knoxville, Tennessee, April 18-19, 1985). Mount Pleasant, Michigan: Central Michigan University Press.

Fisher, Raymond (1982). "External students: Common Problems in library resources." In *The Part-Time Students in the Library* (pp. 3-10). Philip Payne (ed.). London: City of London Polytechnic Library and Lending Service.

Fisher, Raymond (1981). "Library services for university adult education: A neglected area." *Adult Education* Vol.53,no.6(1981):372-375.

Fisher, Raymond, and Rosemary Bolton (1987). *Library Services for Extramural Courses: The Results of a Survey 1987*. Birmingham, UK: University of Birmingham, Extramural Library.

Garrison, D.R. (1989). *Understanding Distance Education: A Framework for the Future*. London: Routledge.

Harry, Keith (1985). "A Selective bibliography on study centres and their functions, and on the applications of new technology in student support." In *An Australian Casebook of Study Centres in Distance Education* (pp. 113-130). Angela S. Castro, Kevin T. Livingston and Paul H. Northcott, (eds.). Geelong: Deakin University Distance Education Unit.

Haworth, D. Elaine (1982). "Library services to the off-campus and independent learner: A review of the literature." *Journal of Librarianship* Vol.14(July 1982):157-175.

Jackson, Miles M. (1983). "Distance learning and libraries in the Pacific Islands." *International Library Review* Vol.15,no.2(April 1983):177-184.

Kascus, Marie, and William Aguilar (1988). "Providing library support to off-campus programs." *College and Research Libraries Vol.49,no.1(January 1988):29-37.*

Keegan, Desmond (1990). Foundations of Distance Education (2nd ed.). London: Routledge.

Konrad, Abram, and James Small (1989). "Collaboration in distance education." In *Post-Secondary Distance Education in Canada: Policies, Practices and Priorities* (pp. 197-203). Robert Sweet, (ed.). Athabasca: Athabasca University.

Latham, Sheila, Alexander L. Slade, and Carol Budnick (1991). *Library Services for Off-Campus and Distance Education: An Annotated Bibliography*. Ottawa: Canadian Library Association.

Marsterson, W.A.J., and T.D. Wilson (1975). "Home based students and libraries." *Libri* Vol.25,no.3(Sept.):213-226.

McCabe, Gerard B. (1983). "Library services for the distant learner: The Clarion State College Libraries' experience." Paper presented at the Annual Conference of the National University Continuing Education Association (Reno, Nevada, April 1983) (ERIC Document ED 232 684).

Mugridge, Ian, and David Kaufman, eds. (1986). *Distance Education in Canada*. London: Croom Helm.

Payne, Philip (ed.) (1983). *The Part-Time Student in the Library*. London: City of London Polytechnic Library and Lending Service.

Ruby, Carmela (1987). "Meeting and supporting learners' needs in distance education." Paper presented at the 53rd International Federation of Library Associations (IFLA) General Conference (Brighton, England, August 16-21, 1987) (ERIC Document ED 299 998).

Salisu, T. M. (1984). "The library and the open university system." *International Library Review* Vol.16,no.1(Jan. 1984):35-43.

Shklanka, Olga (1990). "Off-campus library services: A literature review." *Research in Distance Education* Vol.2,no.4(October):2-11.

Slade, Alexander L. (1988). "The second Canadian off-campus library services survey, 1988. Final report." Victoria: University of Victoria (ERIC Document ED 305 074).

Slade, Alexander L. (1986). "Thirteen key ingredients in off-campus library services: A Canadian perspective." Paper presented at the Off-campus Library Services Conference (Reno, Nevada, October 23-24, 1986). Mount Pleasant, Michigan: Central Michigan University Press.

Slade, Alexander L. (1985). "Canadian off-campus library services survey." Victoria: University of Victoria (ERIC Document ED 291 382).

Smyrnew, John (1983). *Characteristics of Athabasca University Students* (Institutional Studies Report, No.5). Edmonton: Athabasca University.

Ul-Hassan, Mahmud (1984). "The Allama Iqbal Open University Library." *International Library Review* Vol.16,no.1(Jan. 1984):45-57.

Wijesinghe, Malini N. (1988). "Provision of library resources for open university students in Sri Lanka." *Library Acquisitions: Practice and Theory* Vol.12,no.3/4(1988):297-302.

Wolf, Marjorie Ann (1951). *Library Extension Services of the Colleges and Universities of the United States: A Bibliographic Survey* (Master's thesis). Western Reserve University.

Appendix 1

Questions for the SML Telephone Survey (Pilot Study)

1. Age group ☐ under 20 ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50+

2. Gender ☐ Male ☐ Female

3. How many AU courses have you completed? ☐ 0 ☐ 1-3 ☐ 4-6 ☐ 7-9 ☐ 10+

4. How many AU courses are you currently enrolled in? ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

5. Do you consider use of the AU library essential for success in your AU courses?
   ☐ Yes ☐ No

6. What kinds of library materials are usually required for your AU courses?
   ☐ Books ☐ Journal articles ☐ AV materials

7. What is the primary reason you request library materials?
   list reason briefly _____

8. What is (are) the primary sources for library materials you request from the AU library?
   ☐ SML ☐ Tutor ☐ Library selection on subject

9. How often do you consult the SML for library materials?
   ☐ Always ☐ Never ☐ Occasionally

10. Do you tell the Library the subject of your assignment? ☐ Yes ☐ No

11. Would you prefer the library to send you materials on your topic in addition to those you specifically request? ☐ Yes ☐ No

12 If the AU library does not have the material you request, do you try to obtain the material elsewhere? ☐ Yes ☐ No

13. In your opinion, is the SML an essential component of your course package?
   ☐ Yes ☐ No

14. In your opinion, should the SML provide information about material not owned by AU Library so that students can try to get the material elsewhere?
   ☐ Yes ☐ No

15. What suggestions do you have for the AU Library to improve service to you?

Appendix 2

19 February 1991

From: Steve Schafer

To: Pretesting participants

Subject: Pretesting of survey questionnaire

Thank you for kindly agreeing to participate in the pretesting of this survey questionnaire. Your help is very much appreciated and important to the research upon which my thesis will be based. I am concerned that the survey questionnaire be as clear as possible, free from anything that is poorly worded, ambiguous, or difficult to understand.

Please work through the questionnaire as if you had received it through the mail. When you are finished, note any areas of the questionnaire in which you experienced difficulty with respect to directions, wording, meaning of a word, or anything else that was confusing or unclear.

Please return the questionnaire, with your comments, to me in a sealed envelope before 22 February 1991. Be assured that I will handle the questionnaire you return to me (with your comments) in the most anonymous and confidential manner that is possible. I will review all comments and perhaps follow up with a brief telephone call to confirm that I did receive the pretest questionnaire and to review the comments that you made. My intention is to incorporate into the final draft of the survey form any suggestions that will contribute to the quality of the survey questionnaire before mailing it out for real the first part of March 1991.

If you have any questions, please do not hesitate to contact me at 675-6259, 675-4947, or email: steves@cs.athabascau.ca.

Again, thanks,

Steve

Appendix 3

11 March 1991

Dear Athabasca University student:

I would appreciate your cooperation in completing the attached survey form and returning it to me in the addressed, postage-paid envelope.

The objective of this survey is to gather information about Athabasca University student use of the supplementary materials list. This is only the second survey of its type at Athabasca University and it is being conducted as the basis for my thesis research for the degree of Master of Library and Information Studies (MLIS) at the University of Alberta. The research is supported by the Athabasca University Library.

It is anticipated that the information gathered through this survey will help to evaluate the library services provided to Athabasca University students, especially as our library services and the supplementary materials list are closely related.

Please be assured that every effort will be made to handle all information received in the most anonymous and confidential manner possible. No student, name, identification number, or library referred to will be identified in any verbal or written report of this project. Your participation in this survey is important and voluntary.

Please complete the attached questionnaire and return it in the addressed, postage-paid envelope by **March 25, 1991**, or as soon as possible. Please note that you may be among those students selected for brief follow-up by telephone in April; your participation in this would also be voluntary. If you have any questions about the survey, please call me collect at (403) 675-6259.

Thank you for your cooperation and participation.

Yours truly,

Steve Schafer
Reference Librarian

Enclosures

Appendix 4 Survey of Student Use of the Supplementary Materials List

Please base your answers to the following questions on your experience as an Athabasca University student. Be assured that no individual, student name, identification number, or library will be identified in any verbal or written report of this survey. All information will remain anonymous; your participation is voluntary.

Section A. Student Profile

(1) Age group: ☐ under 20 ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or more years

(2) Gender: ☐ Male ☐ Female

(3) Highest level of education attained:
☐ Elementary ☐ Secondary ☐ Some courses beyond secondary
☐ Post-secondary diploma ☐ Post-secondary degree
☐ Other (Please specify) _____

(4) Faculty currently enrolled in at Athabasca University:
☐ Administrative Studies ☐ Arts ☐ Science ☐ Undeclared

(5) Number of Athabasca University courses currently enrolled in:
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ More than 5

Section B. Profile of Library Use Based on a Current Course

Please identify the Athabasca University course that you are **currently enrolled in** and answer the following questions about it. (If you are enrolled in more than one course, select the one course that you are **nearest to completing**, and answer the following questions about it).
Course name and number _____

(1) Have you borrowed library materials for this course? ☐ Yes ☐ No
If NO, go to **Section C. General Library Experience**, on page 3.

(2) What types of library materials have you borrowed? ☐ Books ☐ Journal articles
☐ Audio materials ☐ Video materials ☐ Other (Please specify) _____

(3) On what basis did you select the library materials that you borrowed?
☐ Specific library materials ☐ Library materials based on a subject
☐ Combination of both
(Please elaborate)

_____

_____

_____

(4) From which library or libraries have you borrowed library materials?

☐ Athabasca University Library

☐ Other library (Please identify) _____

If you did NOT check Athabasca University Library, please go to **question 9.**

(5) If you have borrowed library materials from Athabasca University Library, how did you request them? ☐ Telephone ☐ Mail ☐ FAX ☐ In-person (Check all that apply)

(6) If you have borrowed library materials from Athabasca University Library, how many times have you made requests for library materials? _____ (Times)

(7) Were you satisfied with the Athabasca University library materials you received?

☐ Yes ☐ No ☐ Partially

(Please comment)

_____

_____

_____

(8) Were you satisfied with the time it took for the Athabasca University library materials to arrive?

☐ Yes ☐ No ☐ Partially

(Please comment)

_____

_____

_____

(9) Does the course you are enrolled in have a Supplementary Materials List?

☐ Yes ☐ No ☐ Not sure

If YES, please answer the following questions.

If NO or NOT SURE, go to question 4, in **Section C. General Library Experience**, on page 4.

(10) Are the materials on the Supplementary Materials List relevant to the course you are taking?

☐ Yes ☐ No ☐ Partially ☐ Not sure

(Please comment)

_____

_____

_____

(11) Have you requested library materials listed on the Supplementary Materials List from a library other than Athabasca University Library? ☐ Yes ☐ No

If YES, were you successful in getting those library materials from another library?
☐ Yes ☐ No

If you were NOT successful, describe the reasons why you did not get those library materials.

_____

_____

_____

(12) In your opinion, is the Supplementary Materials List an essential component of the course package?
☐ Yes ☐ No
(Please comment)

_____

_____

_____

(13) Are you enrolled in two or more Athabasca University courses? ☐ Yes ☐ No

If YES, would you say that your library experience with this course is typical of the other course or courses that you are enrolled in? ☐ Yes ☐ No
(Please comment)

_____

_____

_____

(14) Go to question 4 in **Section C. General Library Experience**, on page 4.

Section C. General Library Experience

(1) Please explain why you have not borrowed library materials for this course.

_____

_____

_____

(2) Are you aware that Athabasca University provides library services to registered students?
☐ Yes ☐ No

(3) Do you know the procedure for requesting library materials from Athabasca University Library?
☐ Yes ☐ No

(4) In your opinion, is it essential to use library materials to complete an Athabasca University course? ☐ Yes ☐ No

(Please comment)

_____

_____

_____

(5) Have you ever used a library catalog on computer? ☐ Yes ☐ No

(6) Do you know whether or not Athabasca University's library catalog is currently available on computer to students? ☐ Yes ☐ No ☐ Not sure

(7) Do you presently own or have access to a computer? ☐ Yes ☐ No

If YES, does it have a modem for remote access? ☐ Yes ☐ No

(8) If the Athabasca University Library catalog were available to you through remote access, please comment on how you think access to it might affect your studies with Athabasca University.

_____

_____

_____

(9) Please feel free to make any additional comments about the Supplementary Materials List and/or Athabasca University Library.

_____

_____

_____

Thank you for contributing to this project. Please return the survey form in the envelope provided, by **March 25,1991**, to:

Athabasca University Library
Steve Schafer
Box 10,000
Athabasca, AB T0G 2R0

This mail survey questionnaire has been approved by the Ethics Review Committee, Faculty of Library and Information Studies, University of Alberta. If you have any questions or comments, please contact Dr. Alvin Schrader, thesis supervisor, at (403) 492-4578.

Appendix 5 **Survey of Student Use of the Supplementary Materials List**

Please base your answers to the following questions on your experience as an Athabasca University student. Be assured that no individual, student name, identification number, or library will be identified in any verbal or written report of this survey. All information will remain anonymous; your participation is voluntary.

Section A. Student Profile

(1) Age group: ☐ under 20 ☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60 or more years

(2) Gender: ☐ Male ☐ Female

(3) Highest level of education attained:
☐ Elementary ☐ Secondary ☐ Some courses beyond secondary
☐ Post-secondary diploma ☐ Post-secondary degree
☐ Other (Please specify) _____

(4) Faculty currently enrolled in at Athabasca University:
☐ Administrative Studies ☐ Arts ☐ Science ☐ Undeclared

(5) Number of Athabasca University courses currently enrolled in:
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ More than 5

(6) Number of Athabasca University courses completed:
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 or more

Section B. Profile of Library Use Based on Most Recent Completed Course

Please identify the Athabasca University course that you **completed most recently** and answer the following questions about it.
Course name and number _____

(1) Did you borrow library materials to complete the course? ☐ Yes ☐ No
If NO, please go to **Section C. General Library Experience**, on page 3.

(2) What types of library materials did you borrow? ☐ Books ☐ Journal articles
☐ Audio materials ☐ Video materials ☐ Other (Please specify) _____

(3) On what basis did you select the library materials that you borrowed?
☐ Specific library materials ☐ Library materials based on a subject
☐ Combination of both
(Please elaborate)

_____

_____

(4) From which library or libraries did you borrow library materials?

☐ Athabasca University Library
☐ Other library (Please identify) _____

If you did NOT check Athabasca University Library, please go to **question 9**.

(5) If you borrowed library materials from Athabasca University Library, how did you request them?

☐ Telephone ☐ Mail ☐ FAX ☐ In-person (Check all that apply)

(6) If you borrowed library materials from Athabasca University Library, how many times did you make requests for library materials? _____ (Times)

(7) Were you satisfied with the Athabasca University library materials you received?

☐ Yes ☐ No ☐ Partially
(Please comment)

_____

_____

_____

(8) Were you satisfied with the time it took for the Athabasca University library materials to arrive?

☐ Yes ☐ No ☐ Partially
(Please comment)

_____

_____

_____

(9) Did the course you completed include a Supplementary Materials List?

☐ Yes ☐ No ☐ Not sure

If YES, please answer the following questions.

If NO or NOT SURE, go to question 4, in **Section C. General Library Experience**, on page 4.

(10) Were the materials on the Supplementary Materials List relevant to the course you completed?

☐ Yes ☐ No ☐ Partially ☐ Not sure
(Please comment)

_____

_____

_____

(11) Did you request library materials listed on the Supplementary Materials List from a library other than Athabasca University? ☐ Yes ☐ No

If YES, were you successful in getting those library materials from another library? ☐ Yes ☐ No

If you were NOT successful, describe the reasons why you did not get those library materials.

_____

_____

_____

(12) In your opinion, is the Supplementary Materials List an essential component of the course package? ☐ Yes ☐ No

(Please comment)

_____

_____

_____

(13) Have you completed two or more Athabasca University courses? ☐ Yes ☐ No

If YES, would you say that your library experience with this course was typical of the other course or courses that you completed? ☐ Yes ☐ No

(Please comment)

_____

_____

_____

(14) Go to question 4 in **Section C. General Library Experience**, on page 4.

Section C. General Library Experience

(1) Please explain why you did not borrow library materials for this course.

_____

_____

_____

(2) Are you aware that Athabasca University provides library services to registered students?
☐ Yes ☐ No

(3) Do you know the procedure for requesting library materials from Athabasca University Library?
☐ Yes ☐ No

(4) In your opinion, is it essential to use library materials to complete an Athabasca University course?
☐ Yes ☐ No
(Please comment)

_____

_____

_____

(5) Have you ever used a library catalog on computer? ☐ Yes ☐ No

(6) Do you know whether or not Athabasca University's library catalog is currently available to students on computer? ☐ Yes ☐ No ☐ Not sure

(7) Do you presently own or have access to a computer? ☐ Yes ☐ No
If YES, does it have a modem for remote access? ☐ Yes ☐ No

(8) If the Athabasca University Library catalog were available to you through remote access, please comment on how you think access to it might affect your studies with Athabasca University.

_____

_____

_____

(9) Please feel free to make any additional comments about the Supplementary Materials List and/or Athabasca University Library.

_____

_____

_____

Thank you for contributing to this project. Please return the survey form in the envelope provided, by **March 25,1991**, to:

Athabasca University Library
Steve Schafer
Box 10,000
Athabasca, AB T0G 2R0

This mail survey questionnaire has been approved by the Ethics Review Committee, Faculty of Library and Information Studies, University of Alberta. If you have any questions or comments, please contact Dr. Alvin Schrader, thesis supervisor, at (403) 492-4578.

Appendix 6:

Student Use of the Supplementary Materials List				
Column	Q #	Var. Name*	Var. Label	Value Label
1-3			respondent #	001-269
4	Q 1	A.1	age	0=no response 1=under 20 2=20-29 3=30-39 4=40-49 5=50-59 6=60 or more years
5	Q 2	A.2	gender	0=no response 1=male 2=female
6	Q 3	A.3	highest ed	0=no response 1=elementary 2=secondary 3=courses>secondary 4=post-second dip 5=post-second degree 6=other
7	Q 4	A.4	AU faculty	0=no response 1=admin 2=arts 3=science 4=undeclared

8	Q5	A.5	courses in	0=no response 1=1 2=2 3=3 4=4 5=5 6=>5
9-10	Q6	A.6	courses completed	00=no response 01=1 02=2 03=3 04=4 05=5 06=6 07=7 08=8 09=9 10=10 or more 99=no courses (alt.form)
11-17	Q7	B.0	AU course	XXXX###
18	Q8	B.1	use lib materials	0=no response 1=yes 2=no
19-23	Q9	B.2	type lib material	
19		B.2a	book	0=not checked 1=checked
20		B.2b	journal	0=not checked 1=checked
21		B.2c	audio	0=not checked 1=checked
22		B.2d	video	0=not checked 1=checked
23		B.2e	other	0=not checked 1=checked

24-26 24 25 26	Q10	B.3 B.3a B.3b B.3c	select basis item topic combination	 0=not checked 1=checked 0=not checked 1=checked 0=not checked 1=checked
27-28 27 28	Q 11	B.4 B.4a B.4b	library used AU other	 0=not checked 1=checked 0=not checked 1=checked
29-32 29 30 31 32	Q 12	B.5 B.5a B.5b B.5c B.5d	how made request telephone mail FAX inperson	 0=not checked 1=checked 0=not checked 1=checked 0=not checked 1=checked 0=not checked 1=checked
33-34	Q 13	B.6	# requests	 00=no response 01=1 02=2 03=3 04=4 (etc.)
35	Q 14	B.7	satisfied material	 0=no response 1=yes 2=no 3=partially

36	Q 15	B.8	satisfied time	0=no response 1=yes 2=no 3=partially
37	Q 16	B.9	course have sml	0=no response 1=yes 2=no 3=not sure
38	Q 17	B.10	sml relevant	0=no response 1=yes 2=no 3=partially 4=not sure
39	Q 18	B.11a	request sml mat. other	0=no response 1=yes 2=no
40	Q 19	B.11b	successful	0=no response 1=yes 2=no
41	Q 20	B.12	sml essential	0=no response 1=yes 2=no
42	Q 21	B.13a	completed/enrolled 2>	0=no response 1=yes 2=no

43	Q 22	B.13b	typical	0=no response 1=yes 2=no
44	Q 23	C.2	aware AU lib service	0=no response 1=yes 2=no
45	Q 23	C.3	know request procedure	0=no response 1=yes 2=no
46	Q 25	C.4	lib mat. essential	0=no response 1=yes 2=no
47	Q 26	C.5	used computer lib cat.	0=no response 1=yes 2=no
48	Q 27	C.6	know AU cat.on computer	0=no response 1=yes 2=no 3=not sure
49	Q 28	C.7a	own/access computer	0=no response 1=yes 2=no

50	Q 29	C.7b	modem	0=no response 1=yes 2=no

*This version of SPSSx uses Var. Name, which means Var. Number

Appendix 7

Survey of Student Use of the Supplementary Materials List

Coding Structure for Open Comments

The responses for the open comments on the survey of student use of the supplementary materials list will be done by putting them in flat ASCII files on the UNIX system. Each answer to an open question will be typed on one row only. Each row is later to be read by a computer program as a single field or single answer to a question. The length of the wraparound of a response does not matter.

In the following table the question numbers are identified on the left along with the corresponding row number and variable label. If there is no response for a question then an "#" is entered in the first column of the row normally used for responses to that question. At the end of the open responses for a given respondent one (1) blank row is left before going on to the next respondent.

The question numbers and corresponding rows are as follows:

Open Question Coding		
Question Number	Row Number	Label
Entry number	1	entry number
B 3	2	basis for selecting library materials
B 7	3	satisfied with materials received
B 8	4	satisfied with time materials arrive
B 10	5	materials on sml relevant to course
B 11	6	why did not receive materials from other library
B 12	7	sml essential
B 13	8	typical experience
C 1	9	why did not borrow library library materials

C4	10	essential to use e materials
C8	11	how online library catalog may affect studies
C9a	12	comments about sml
C9b	13	comments about AU Library

Appendix 8

Registrations in Specific Courses Identified by Respondents					
Course	Students	Course	Students	Course	Students
ACCT251	2	FNCE349	1	NURS432	1
ACCT253	10	FNCE370	6	NURS450	1
ACCT351	1	FREN100	7	NURS482	3
ACCT451	1	FREN200	2	NUTR330	2
ADMN232	12	FREN242	1	ORGB319	2
ADMN233	1	FREN361	1	ORGB327	1
ADMN371	4	FREN374	1	ORGB364	2
ADMN373	1	FREN375	2	ORGB386	1
ANTH275	3	GEOG261	1	PHIL252	10
ANTH276	1	GEOG302	1	POLI309	2
ANTH307	3	HIST224	2	POLI383	1
BIOL230	11	HIST362	1	PSYC228	3
BIOL341	3	HIST264	2	PSYC289	10
COMM243	8	HIST303	1	PSYC290	4
COMM377	1	HIST325	1	PSYC343	2
COMP203	2	HIST391	1	PSYC388	8
COMP207	2	HIST367	1	PSYC389	1
COMP268	1	HIST399	1	PSYC402	2
ECON246	8	HUMN249	2	PSYC435	1
ECON247	6	IDRL311	1	PSYC455	1
ENGL155	4	LGST331	1	SOAN384	1
ENGL210	2	LGST369	4	SOAN385	1
ENGL211	4	MATH215	13	SOCI287	1
ENGL255	6	MATH270	2	SOCI316	5
ENGL324	1	MATH376	1	SOCI365	4
ENGL396	1	MGSC368	2	SOCI366	1
ENGL431	1	MKTG398	2	TAXX301	2
ENGL450	1	NURS425	3	WMST303	2
Total Courses = 84 (240 respondents)					

Appendix 9

Student Use of Library Materials by Academic Discipline

Discipline (respondents)	Library Materials Borrowed by Students			
	Yes		No	
	Number	Percent	Number	Percent
ACCT (15)	3	20%	12	80%
ADMN (18)	2	11%	16	89%
ANTH (8)	2	25%	6	75%
APST (1)	0	0	1	100%
BIOL (16)	3	19%	13	81%
COMM (9)	1	11%	8	89%
COMP (5)	0	0%	5	100%
ECON (14)	1	7%	13	93%
ENGL (20)	7	35%	13	65%
FNCE (7)	0	0%	7	100%
FREN (14)	7	50%	7	50%
GEOG (2)	0	0%	2	100%
GEOL (1)	0	0%	1	100%
HIST (11)	3	27%	8	73%
HUMN (2)	1	50%	1	50%
IDRL (2)	0	0%	2	100%
LGST (5)	0	0%	5	100%
MATH (15)	0	0%	15	100%
MGSC (2)	0	0%	2	100%
MKTG (2)	0	0%	2	100%
NURS (8)	4	50%	4	50%
NUTR (2)	0	0%	2	100%
ORGB (6)	1	17%	5	83%
PHIL (9)	1	11%	8	89%
POLI (6)	5	83%	1	17%
PSYC (32)	9	28%	23	72%
SOAN (2)	1	50%	1	50%
SOCI (12)	1	8%	11	92%
TAXX (2)	1	50%	1	50%
WMST (2)	1	50%	1	50%
Total (250)	54	22%	196	78%

Appendix 10

Courses With a Supplementary Materials List (SML) and Student Recognition of the SML					
Course	Students in Course	Students Recognizing SML	Course	Students in Course	Students Recognizing SML
ADMN373	1	0	HUMN249	2	1
ANTH275	3	0	IDRL311	1	0
ANTH276	1	0	MKTG398	2	0
ANTH307	3	1	NURS432	1	1
BIOL230	11	1	NURS450	1	1
ECON246	8	0	NURS482	3	1
ECON247	6	0	NUTR330	2	0
ENGL210	2	2	ORGB319	2	0
ENGL211	4	1	ORGB327	1	0
ENGL255	6	1	ORGB364	2	0
ENGL324	1	1	PHIL252	10	1
ENGL396	1	0	POLI309	2	2
ENGL431	1	1	POLI383	1	1
ENGL450	1	1	PSYC228	3	0
FREN100	7	3	PSYC289	10	3
FREN200	2	0	PSYC290	4	2
FREN242	1	0	PSYC343	2	0
FREN361	1	0	PSYC388	8	0
FREN374	1	0	PSYC389	1	0
FREN375	1	0	PSYC402	2	2
GEOG261	1	0	PSYC435	1	0
GEOG302	1	0	PSYC455	1	0
HIST224	2	1	SOAN384	1	0
HIST263	1	0	SOAN385	1	0
HIST264	1	0	SOCI287	1	1
HIST303	1	0	SOCI316	5	0
HIST325	1	0	SOCI365	4	0
HIST361	1	0	TAXX301	2	0
HIST367	1	1	WMST303	2	1
HIST399	1	1			